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A DISCOURSE OF WINTER.

Spring is here, according to the calendar, but not so in actual experience; and therefore, while winter still broods over all northern climes, it may not be unsuitable to consider some of its characteristics, and perchance to gather up a few of its lessons. He who taught His followers from the summer lilies, doubtless also instructed them from the aspects of nature in winter.

To the eyes of most people, winter is a season of desolation and gloom. The flowers are dead; the bees and other insects no longer hum; the song-birds have left the sky; the leaves have fallen from the trees, and are whirled, withered and dead, upon the l... The streams are locked in ice; and snow, like a heavy shroud, is spread over all the earth. Vegetable growth has ceased, and even vegetable life is dormant, if not wholly extinct. The sun rides low in the heavens, and, with its cold and slanting beams, gives but a brief day.

But this is not the whole truth: Winter has other and more cheerful aspects. There is life amid this seeming decay and death. Vegetation absolutely requires a period of rest, and winter is its opportunity. The bees are napping in their cosy cells; the birds are not destroyed, but are gone on pleasure excursions southward, looking after their possessions and friends around the Gulf. The streams and lakes are frozen—are they? Well, they make fine skating-parks now, and are having an eye to the creams of next August. What could civilized man do without their sparkling crystals to cool the summer heats? It would be a heavy loss to northern commerce, if its cargoes of ice were dissolved. The leaves have fallen—have they? Well, they were ripe, and of no further use to the branches, and by their fall they will now help to fertilize the ground and to promote the trees' growth in succeeding years.

Frost, which in some respects is destructive, is also preservative. It checks the too rapid decomposition of vegetable and animal matters, and by purifying the air prevents disease and promotes bodily health and vigor. Who does not know, by expe-

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rience, that the return of the cold season, after the debilitating heats of summer, produces an exhilaration of spirits and gives a new accession of physical strength? A friend of the writer, who spent several years in Bogota, relates that, while at first the perpetual summer was a perpetual delight, afterwards it became monotonous, tiresome, and weakening to body and mind, and that he often longed for the refreshing winds and frosts of the north. If the inhabitants of northern countries possess any superiority over those of southern lands, it is owing largely to the influence of their climate. It is in cold countries that home is most tenderly loved, and fireside virtues most vigorously flourish.

"Oh Winter, ruler of th' inverted year,
Thy scattered hair with sleet like ashes filled,
Thy breath congealed upon thy lips, thy cheeks
Fringed with a beard made white with other snows
Than those of age, thy forehead wrapped in clouds,
A leafless branch thy sceptre, and thy throne
A sliding car indebted to no wheels,
But urged by storms along its slippery way,
I love thee, all unlovely as thou seem'st,
And dreaded as thou art! Thou hold'st the sun
A prisoner in the yet undawning east,
Shortening his journey between morn and noon,
And hurrying him, impatient of his stay,
Down to the rosy West; but kindly still
Compensating his loss with added hours
Of social converse and instructive ease,
And gathering at short notice, in one group
The family dispersed, and fixing thought
Not less dispersed by daylight and its cares.
I crown thee king of intimate delights,
Fireside enjoyments, home-born happiness,
And all the comfort that the lowly roof
Of undisturbed retirement, and the hours
Of long, uninterrupted evening, know."

One of the most marked features of winter is its snow. This interferes with some of our pleasures and profitable labors. The tourist and landscape-painter will seldom flounder through snow-banks in quest of fine scenery. The botanist—where are the flowers he loved so well? The geologist, entomologist, and indeed the student in almost every department of natural science, finds his sphere of observation reduced to narrow bounds. The gardener must hang up his shovel and hoe, and the farmer can no longer sow and reap and gather into barns.

Yet there is a bright side to this picture. The snows which block up our roads and fields bring with them a partial compensation for the discomforts they produce. The old proverb that "snow is the poor man's manure" is believed to have its basis in scientific fact. Chemical analysis finds a larger per centage of ammonia in snow than in rain. This at least is true, that snow is a powerful absorbent, purifying the air and returning the impurities as fertilizers to the soil. Melt in a clean vessel a mass of snow which has lain a short time on the ground, and the taste will detect foreign elements in the water. This is most apparent in the neighborhood of large towns, where the atmosphere is more or less impure. The harshness and dryness produced in the mouth by drinking snow-water, and the unpleasant effects on the skin by washing in it, are ascribed to the impurities it contains. The disease called *goitre*, prevailing in Alpine regions, is also attributed by some to the use of snow-water.

A certain writer illustrates the absorbent power of snow thus: "Take a lump of snow (crust answers well,) of three or four inches in length, and hold it in the flame of a lamp; not a drop of water will fall from the snow, but the water, as fast as formed, will penetrate or be drawn up into the snow by capillary attraction. It is by virtue of this power that it purifies the atmosphere, by absorbing and retaining its noxious and noisome gases and odors." Snow also absorbs exhalations from the earth, and returns their fertilizing properties to the soil. Hence, marshes and stagnant pools become inodorous in winter, and the unwholesome effluvia of vegetable matter everywhere decaying is retained, and with the melting of the snow in spring is given back to the earth. So much as this, at least, we fully believe, that "the poor man's manure" is as efficacious as some of the patent fertilizers of the day; and it is a great deal cheaper.

Moreover, we are told that snow actually

nourishes a species of animal life. Dissolve a handful of snow in a glass of water entirely free from *infusoria*, and you will soon discover a multitude of animalcules moving about in it full of life. Every one has read of the famous "red snow" of the Arctic regions, which is only another exhibition of this microscopic race.

Snow helps the springs and mill streams in winter. Were the ground naked from fall to spring, and frozen meanwhile several feet deep, the springs would dry up, and water-wheels of every description would stand idle. As it is, however, the snow prevents the frost from penetrating to a great depth—especially among the wooded hills, which are the fountain-heads of springs and streams—and by their gradual melting keep up a supply of water for man and beast.

Not the least important use of snow is the protection it affords to tender vegetation. Even in northern latitudes, there is a multitude of tender and half-tender indigenous plants which require more or less protection in winter. Nature provides for them most wisely. She hangs over them the branches of neighboring trees and bushes, gathers about their roots a many-folded blanket of dry leaves, and last of all spreads over them a fleecy mantle of snow. With this covering, they pass through the coldest winter safely; when if transplanted to exposed situations they would certainly perish. But besides, our gardens and fields are stocked with plants and grains which are natives of warmer climates, and need protection still more. Sweep off the snow from our wheat fields and meadows, and at least a portion of the crops would be winter-killed. Some of the choicest herbaceous plants in our gardens, brought from milder regions, will pass unharmed through the severest winters, if only they are covered with snow. So of many tender shrubs. With their branches fastened to the ground, they hybernate in Canada as well as at the tropics. The buds of peach trees are often killed in severe winters, while if a few branches happen to get bent under the snow, they produce a splendid show of fruit. Scientific travelers in Siberia have recorded instances in which, with the temperature of the air above the snow at 72° below zero, that beneath was 29° above zero, showing a difference of 100°. Dr. Kane, in his "Arctic Expedition," mentions finding underneath the snow, at latitude 78°, "the andromeda in full flower, and saxifrages and carices green under the dried tufts of last year." * * * "Here, too, the silene and cerathrium, as well as the characteristic flower-growths of later summer, the poppy and sorrel, were already recognizable." * * * "Few of us at home," he continues, "can realize the protecting value of this warm coverlet of snow. No eider-down in the cradle of an infant is tucked in more kindly than the sleeping dress of winter about this feeble flower-life."

When the snow falls early in winter and remains until spring, the ground is seldom frozen at all; and if frozen a few inches deep before the snow falls, the heat of the subsoil thaws out the frost above it, and the superincumbent snow prevents another freezing, so that in early spring the ground is soft and ready for the plow and spade.

Did the space allotted us in these columns allow, we might speak of the opportunity which winter affords the farmer and his household for mental and social culture; of the beauty of the snowy landscape when lighted up by the sun; of the brilliancy of the winter sunsets; the peculiar depth and purity of its skies, and the lustre of its stars; of the pleasure of noting the first indications of approaching spring, and their steady increase until "the time of the singing of birds is come, and the voice of the turtle is heard in the land;" but here we must stay our pen.

A. D. G.

DESIGN FOR COUNTRY HOUSE OR PARSONAGE.

BY REV. P. D. OAKEY, JAMAICA, L. I.

THE desire to produce pleasing effects in the structure of country houses has much increased the past few years. The gratifying evidence of this is forced upon our attention on every line of travel. Every one who contributes to this taste is so far a benefactor to his kind. It has this plea for universal adoption, that while it violates no principle of utility, it elevates mentally and morally only by the exercise of correct judgment without expense. I speak of it in its simple, and therefore purer forms of cottage building.

It is thought that the plan here submitted will commend itself to the taste of those who, having a moderate income—and such constitute the bulk of society—and who, having no money to lavish upon merely useless show, would have enough variety in style, solid embellishments, convenience of arrangement, rooms of suitable size and number—affording sufficient retirement and accommodation as shall combine to produce a pleasing impression, externally and internally, upon which the eye of the stranger is welcome to rest, and make the happy

FIG. 28.—*Perspective.*

and contented family feel that they have a *home*, the endeared remembrances of which will never leave them till a home on earth is needed no more.

Some of these effects, we think, may be realized in this plan. Enter the gate, and by a neatly-trimmed winding-path step upon the veranda and look for yourself. It is situated on a village lot, say 65 feet front and 200 deep. It is not built large in front, so that space may intervene on either side for shrubbery and trees to secure seclusion and keep out intrusive eyes of neighbors. Yet, in the dining-room a bay window commands a street view. It fronts the east, and hence the rooms used have a southern aspect. The veranda itself is worthy of a passing notice, as it is ample, compared with the size of the house, and its form in keeping with the bay windows that diversify and give character to the exterior. I would not make the path to the veranda direct in front of it, at right angles with the street, but from a gate near the southern corner of the front lot by a gentle serpentine line, and thus

leave the space of the front yard opposite the parlor window unobstructed, for the exhibition of taste in cultivating some of the smaller flowers and shrubbery, which, with a closely-shaven grass-plat, as the groundwork, never fails to awaken a sense of pleasure.

But the entry-door is open—(it opens readily to its friends). Look in! You would have the hall go all the way back? Well, that *is* the old-fashioned way, but it has not the beauty of *utility* to recommend it. There is no need of it, and the open seams of the "back door" only made sluices for Boreas of the north storm to whistle his ghostly stories through of dark nights, as it used to seem to us in our childhood. Besides making a warmer house, we have

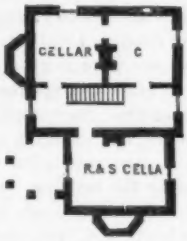

FIG. 29.—*Cellar.*

FIG. 30.—1*st Floor.*

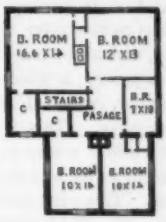

FIG. 31—2*d Floor.*

made better use of that space, as you shall see when we get to it; and economy in fuel and space are two important items since the strike in the coal regions of Pennsylvania and the high price of material.

FIG. 32.—1*st Floor differently arranged.* (*not referred to in description.*)

But in the meanwhile, step a moment into the parlor. It is not overlarge, but cozy, well lighted, well ventilated, and sufficiently large enough for ordinary families, its marble-manteled fire-place offsetting its bay window which enlarges the room, and gives to it an air of refinement, its north and south windows equalizing each other, the one shielded from the rays of the sun by opening under the shade of the veranda, while in the space on the right of the fire-place, is just the place for the piano. But cross into the dining or sitting-room, and observe, in passing that its door opens right opposite the front door, so that when the dog star is in the ascendancy and air is desired, you can sit with both doors opened, having a pleasant front view unexposed. This room is of proper capacity, has a good china closet, a plain marble mantle, an end window commanding the garden, and a bay window giving a pleasing effect to the whole, and raising the whole above the monotonous style of mediocrity. As this bay window is quite roomy, 8 feet in the clear, and as it is supposed to face the south, in winter time it would make quite a pretty conservatory for house plants, which, if properly cared for, contribute much to the cultivation of a correct taste. The enjoyment of life consists not so much

in great things as in extracting items of pleasure from little things. The cultivation of a single house plant—the architectural order of a room—the proper disposition of furniture—never go without their proportionable reward.

From this room, access to the kitchen is easy. That kitchen is an important place; it wants good light, a good fire-place, a large closet, a cistern pump, and waste-pipe, easy access to the yard and cellar, and it has them all. A short passage-way leads from these rooms to the cellar steps under the stairway, and to the main hall. Also from this passage-way a door opens into a small chamber, which I have designated as a store-room. This is a useful apartment, and while it wants to be out of the way, it needs to be near the kitchen and sitting-room. This room we have stolen from the hall. Our Biddies are not all above suspicion; and where they have so many cousins, all "dacent people sure," keeping house, sugars and teas and soap have the faculty of disappearing with marvelous alacrity. The good housewife loves to have the key of one door, where her household treasures may be safely stored, where she may be the almoner of her own bounty, without the aid of Miss Culinary Sly, through whom she may be supporting two or three families of the faithful, "unbeknownst" to herself. Or if Biddy is honest, and this room is not wanted for this purpose, it might, upon a pinch, be used for her sleeping-room; or if the proprietor wanted a little office to keep his books, papers &c., here, separated from other apartments, is the place. I hope you don't smoke; but if you are guilty of that much-condemned practice, here is just the place for you and your friend to chat, and puff your smoke out of the north window, without intruding the aroma of the filthy weed into any other part of the house. If, as Downing says, the poet Cowley confessed to a love for little things, here in this back hall little room, he might indulge his diminutive poetic idea to his satisfaction.

Let us go up stairs. Everything here speaks plainly for itself, so I will not detain you. The rooms are quite large, all have closets, and can be heated, except the small hall chamber, by stoves. Stove-pipe holes are in the chimneys, and swinging sashes over the doors to give ventilation. The chimneys are inside the building, so that all heat is saved. A clothes' room, which might be made a bath room, opens into the large chamber adjoining. The walls are filled in with brick. The roof projects, and the gables have large boards of stout plank. It is thought that in the external appearance of this house, and the order of the rooms, there are advantages pleasing to a good taste and conducing to the comforts of every-day home life.

This house, as it has two fronts, would be a very good plan for a corner house.

I omitted to say in the proper place, that, placing the closet in the front hall up stairs in the chamber, there would be room for a stairs, over the other stairs, into the attic story, where there is space for three pleasant bed-rooms.

PEACH TREES IN POTS.

BY GERALD HOWATT.

Growing Peaches, Nectarines, Apricots and other stone fruit has not attained the attention and care that they ought to have. I mean the growing of them in pots; the simplicity of it is not generally understood; they require no more attention than any other ordinary stove or greenhouse plant. Pot culture is carried in Europe to a very great extent, and I must certainly say that our facilities on this continent are far ahead of Europe, the principal feature of which is, our fine clear and hot weather. As the great desideratum in growing peaches, nectarines, &c., is to get our fruiting wood well ripened.

When this point is attained, you can easily master the other difficulties with a little attention. The following is my system of growing and treatment from the time of receiving from the nursery to their fruiting. In selecting soil, I take a good strong loam one spade deep, leaving the grass on. I usually get this from the side of the road or along an old fence. If it can be got in the fall, and thrown in a heap all winter, so much the better; but my usual way is to take it direct from the fences to the potting shed and use it. I have tried it both ways, letting it be six months, and turning it right in and using it, and never noticed a particle of difference in the growth or fruit. If it is a stiff loam I mix it with charcoal dust, enough to make it free. I allow one quart of bone dust, the coarser the better; this keeps the soil porous, and is, in my practice, the best stimulant for those fruits. I give my plants the first year, three shifts, two in growing pots, and the third into the fruiting pot. A quart of bone dust is divided into three parts; at the first potting put one part, the second potting the next part, and the third potting the balance. I use no manure in my potting. The tree on arriving from the nursery will look like this

FIG. 33.—*Tree as received from Nursery.*

I then cut them down to ten or twelve inches above the roots, looking like this—

FIG. 34.—*Tree Pruned for Potting.*

pruning the roots well, only leaving enough fibres to start the growing. The plants that I use are only one year old from the bud maiden trees. My first pot is two gallons; that is, eleven inches deep and ten diameter. In potting I keep the neck of the tree over ground; that is, leave your roots for about three inches thus

FIG. 35.—*Tree in Pot.*

on the surface of your soil. My reason for adopting this system is that the borers can be more easily detected if, unfortunately, they should show themselves. At your first two pottings do not let your earth come to the top of your pot. Keep it one inch below this to hold the water; in your third shift or fruiting pot, keep the earth two inches below the top of your pot; this is to give room for mulching with manure. Now the time for potting must altogether depend on your facilities for starting the trees. If you have pits to keep them in until the middle of May, at least until settled weather, I should advise the first potting to be done in March; this gives a fine long season for growth if that is the case. After potting, water with a rose just sufficient to settle the earth around them, and afterwards very sparingly until they commence to break (grow). I will state one particular item here, that is your drainage. Put one large broken shred on the hole, the hollow down, which leaves a space between the bottom of your pot and

your shred; then other pieces around that, and cover the whole bottom of the pot; when finished let it look like a saucer turned upside down, high in the middle and falling to the sides. My fruiting pots I have the holes cut with a cold chisel three inches by two. When you pot first do not plunge them, nor until they have made about four inches of growth. This is obvious, as you will bear in mind that there are but few roots to start with, and the weather being chilly, you want the heat on your pots (sun), to start the growth of the roots. After a little the new earth will cleave from the side of the pot; let that at all times be rubbed around with the finger, for if watered without doing this, the water will all run between the ball and the side of the pot, leaving the heart of the plant perfectly dry. If the water should lie on the top of your pot, then there is something wrong in the potting or drainage; if so, turn the plant out and examine it, and rest assured you will find something wrong. I should have mentioned, in all the pottings, gather the lumps and grass, and place them on top of open shreds at the bottom of pot; then fine earth around your roots, the best as it comes. In all the shiftings look out for worms; they are easily discovered by their holes. I generally sprinkle quick lime on top of the pot (on the earth), which draws them out. That's the foundation. When the plants have made shoots six inches in length, select the four strongest for your permanent tree, or branches, and cut off the stem to the upper branch, thus:

Fig. 36.—*Tree at First Pinching.*

By this system you get more fruit, and your tree looks better, and you get more trees into a given space, which is a great object when the present price of glass and tradesmens' wages are taken into consideration; and I do not see the beauty of, or in an umbrella top. When the shoots are from twelve to eighteen inches in length, I stop them, that is, I pinch the top off to make them throw out fruiting wood; when five and six inches long I again stop them, and so on all through the season; when the wood is too thick, and likely to crowd the middle, remove those shoots that are growing to the middle, and remove all water shoots, no matter on what part of the tree they are, as they are useless, those shoots are not much thicker generally than a straw, and runs from the branch about 3 or 4 inches without showing an eye of either fruit or wood. In the middle of May plunge your pots, that is, insert them in the ground up to the rim and from three to four feet apart. From the first starting of your potting, you should syringe your plants every morning with a good force pump, and do not be afraid to use it strong. This makes your plants break well. After the 1st of June, syringe them twice a day, morning and evening. If you have not a barrel syringe, use the next best thing, a hand one, and in syringing be careful and apply the water to the bottom of the leaves as it is there where rests our great enemy, the red spider; they are easily detected, by turning over the leaves you will see them. They look to the naked eye as if the leaf were dusted with red pepper, but a practiced eye can detect them at a glance at the surface of the leaf without examining it; the leaf that has them on will look of a dirty white appearance. Beware of them, for if they get on your plants, all your trouble is gone for nothing. Syringe as directed and you can tell them do their best. About the first of June your plants will be in a condition to receive liquid manure. In applying this you must use a good deal of judgment. If the

plant is weak, give it no stimulant. As a general thing, let it be very weak. When I can get liquid from the barn-yard, I prefer it. The first year I use it half-and-half; that is, half water and half liquid. If I cannot get that, I sink two hogsheads in the ground, to within a foot of the top; one I keep for clean water, for syringing, watering and diluting my liquid manure. Into the other I put one peck of Peruvian guano; fill up with water; stir well up until dissolved. When used, add one half clean water to this half. In watering stove, greenhouse or other plants, with liquid manure, never apply it when your plants are dry. If you do it will kill them. My plan is to water with clear water in the evening, and the liquid in the morning. By adopting this, no risk is run in any way. In June, water your Peaches, Nectarines and Apricots, if in good health, twice a week with this liquid; July, and up to middle of August, three times a week; after that, give them no liquid, as you must now prepare to ripen and harden your wood. If you have attended to the stopping and displacing of all superfluous wood, your plants will by this time have made a fine appearance. My second shifting, I should have said, would be about the 1st of June, into four gallon pots that are thirteen inches deep and twelve in diameter. For this you must use your own judgment. You will see the roots protruding from the hole in the bottom; then take them out of the pot, and if the roots are all around the ball, repot them; be sure, in potting, to leave no spaces between the ball and the pot; in potting, use a flat stick, two inches wide, and bevelled at the point, so that it will not, if it should come in contact with the roots, cut or bruise them, rounding or half-rounding it for the breadth of a hand from the top. In using it, shove it backwards and forwards, so that you make your potting compact, and do not stamp your pot up and down on the potting-bench to break off the fibres, like a paver with his mallet on stones. My last shift I do from the beginning to the middle of August into my fruiting pots or boxes. If pots, they should be six gallons, well drained, and coarse stuff at bottom. I like to have my fruiting plants pot-bound, that is, the roots grown to the outside of the ball. As the after-nourishment of the trees and fruit, I depend on liquid manures and manure mulching. Care must be taken not to let the trees, during the summer, become dry, that is, hard dry, in very warm weather; and while they are making rapid growth, they must be watered perhaps twice a day, and when watered at this stage, let it be done copiously, enough to saturate the whole mass of earth. The drainage will carry off the superfluous water. You can easily detect when they are not properly watered by knocking on the outside of the pot

FIG. 37.—*Tree at end of First Year.*

with your knuckles; if not properly watered, the pots will sound as if they were empty. On or about the first of October, I remove my trees to the vinery to ripen and harden their wood. This must be well attended to, for if the wood is not ripened, it will shrivel and you get no fruit. When they are in the vinery, water them about twice a week in October, as you want no growth; November, about once a week. If the foregoing instructions be carried out, your trees will now be from six to eight feet high, and from four to six feet through

—not bad, you will say, for one season's growth in pots; nevertheless, strictly true. At each potting, examine your tree for borers, just above your roots. On the stem they are easily detected; feel around the stem, if hollow, you will find the borer. The appearance of gum does not always indicate their presence. About the middle of December, remove to a dry cellar to protect from frost. If there is not a cellar, let them be laid down in the vinery and covered with straw or leaves. If this plan is adopted, there will have to be a fire kept in the house sufficient to keep the frost out. I start my peaches as I start my vines; peaches and vines being grown in the same house, making three successions. First house starts 1st of January, second, 1st of February, third, 1st of March. I only have one knife-pruning, which is done by cutting down to a fruit eye, which is distinguished by a double bud. There are single eyes that are fruit buds; those buds are round, the wood buds being long, but the single ones we do not generally depend on. Cut out all wood that does not show fruit-buds. I have a walk through the houses, thirty inches wide, a plank, eighteen inches wide, on each side, to hold in the border compost. This border I make stronger than the soil used for potting, using three parts loam and one part well-decomposed manure. Let this be thoroughly mixed; this is to support the roots that come from the bottom of the pot. I then plunge my pots to the rim, and so close that the branches of each plant nearly touch. Stop them when growing, as mentioned above. I take out all superfluous wood; put on a mulching of cow dung on top of your pot, leaving one quarter of an inch to hold water (as it will shrink); syringe twice a day with water, same temperature as the house. When your buds begin to swell, use twice a week, in watering, one-third part liquid manure; as they progress, use one-half liquid, and use it three times a week; when in flower, water moderately, rather keeping them dryish, and avoid syringing until your fruit is set; keep a moist heat, by keeping the floors wet. If your houses are heated by hot water, keep your troughs well filled, as it evaporates; if by flues, and no troughs on them, keep pans well filled with water. Let all the fruit that sets remain; don't thin any, as your plants are strong enough to ripen all, and if too thin, they are liable to crack.—About a week before they are ripe remove them to the open air, and plunge your pot about six inches and water very sparingly with clean water—in fact, keep them nearly dry. This will give your fruit a fine flavor and a good color. In removing the trees from the house, cut all the roots off that have grown from the bottom. When

Fig. 38.—*Tree in Fruit, Second Year.*

the fruit is gathered, plunge the pots to the rim in a south or east aspect, to ripen the wood, and use no more liquid manure until you commence forcing the following season; keep the syringe going. This treatment is for growing in vineries, and of course the same temperature must be observed if grown in an orchard house. My temperature after the setting would be from 10 to 15 degrees higher all through. An orchard house will save the necessity of removing out-doors to get flavor. The following are the varieties that I use for pot culture:

PEACHES—Hale's Early, Haine's Early, Early York, Early Crawford, Late Crawford. George the 4th, Large Early York, Noblesse, Stump the World, Troth's Early, Red Cheek Melacatoon, Cole's Early Red, Early Tillotson, Early Newington, Gross Mignonne, Jacques Rareripe.

NECTARINES — Stanwick, Boston, Violette Hative, Pitmaston Orange, Elruge.

APRICOTS—Large Early, Large Red, Large Early Moorpark, Peach, Kaisha, Orange. Other varieties may be added to please the taste, but I have found the above the best for forcing.

THE CURRANT WORM.

BY L. A. M.

HAVING read in the report of the meeting of the Farmers' Club, in New York, something about the *Currant Worm*, which is hardly more than a guess, very far from the truth, permit me to describe for your readers the insect in all its transformations. It is of a kind known as measuring *worms*, about an inch and one quarter in length, when full grown; of a bright

FIG. 39.—*Currant Worms.*

orange or yellow color, finely spotted with black; is extremely active, and a voracious feeder. They begin to appear about the middle of May as a very minute, almost black worm, and increase in size and numbers until the middle of June, when they begin to leave the bushes for the earth about their roots. I had them under glass in all stages of growth, and compared them daily with specimens from the gardens. With a garden trowel the earth was turned up, and the chrysalis and the worms, half contracted and incapable of motion, were exposed, precisely like those in the sand under my glasses. The chrysalis, small and almost black, would easily escape notice.

Comparatively few of the worms appear to become butterflies, but still sufficient numbers do pass the chrysalis stage to insure a bountiful supply of worms year after year.

FIG. 40.—*Chrysalis and Perfect Insect.*

They remain in the chrysalis state two weeks, and emerge as small maize-colored butterflies, with faint gray marks on their wings. They flutter about the gardens, never staying far from the currant bushes, for ten or twelve days, and gradually disappear. All those I kept under glass died soon after their escape from the chrysalis state, and I could not discover where those in the gardens laid their eggs, but I am very sure that they are deposited upon the bark of the currant bushes. I buried a quantity of the live worms in a hole about a foot deep, packing the earth over them as hard as I could. For three days they were crawling out of that hole as fresh looking

as ever, and measuring the road to my gooseberry bushes with hungry haste. No amount of *mashing* with trowels or spades seem to kill them after they touch the ground, but they can be drowned very easily. Their name is certainly *legion*, for I have known nine hundred to be shaken from a single bush, at one time. I remember seeing the same worm occasionally some twenty years ago, but it is about seven years since they have appeared in such numbers as to become a pest. I do not see any apparent diminution in their numbers, even in those gardens where they are picked off and destroyed daily in incredible numbers. I believe that a small lantern, set in a pan of water well soaped, would attract the moths at night, and by falling from the sides of the lantern into the water, they would be drowned, which would be a much easier way of destroying them than picking off the worms one by one with the thumb and finger, as most of my friends do. I should like to tell you about the gray worms which ate my pansies, and my *toads* which ate the worms, but I do not know as you care to hear. However, if you do, let me know and I'll tell you all about them.

ANTIRRHINUM.—Silver Belt.

BY PETER HENDERSON.

A great acquisition to our variegated plants, being (unlike most variegations) of robust and healthy growth, leaves glossy green, margined on each edge with white, occasionally tinted with pink; making a compact bushy plant when in bloom,

Fig. 41.—*Antirrhinum.—Silver Belt.*

of from 18 inches to 2 feet in height; flowers in dense spikes beautifully marked crimson and white. The plant originated with me last season among a lot of seedlings, the seed of which I imported from Germany.

NEW SEEDLING CARNATIONS.

Fig. 42—*Carnations—Flatbush and President Degraw.*

The monthly carnation being so important and desirable a plant for winter blooming in our greenhouses, to furnish cut flowers for bouquets and table decorations, we take much pleasure in presenting to our readers an illustration of two new seedlings, which were produced by Messrs. Dailledouze & Zeller, Flatbush, L. I., from seed received from the Botanic Gardens at Geneva, Switzerland.

No. 1. *Flatbush.*—Pure white, very large flower, deeply fringed, fragrant; very full plant; a strong grower and profuse bloomer.

2. *President Degraw.*—Pure white; flower very full, and of perfect form, finely fringed and fragrant; plant of dwarf habit and a profuse bloomer.

We consider these, flowers of high merit, and a valuable addition to this class of plants.

A NEW PEAR.—"MARY."

Ohio, through Professor Kirtland, has given the pomological world many varieties of cherries, one or two pears, while other eminent fruit-growers in that State have brought out, from time to time, apples, pears, cherries, raspberries, strawberries, &c., until the State has acquired a renown for fruit-growing. Last summer, we received two varieties of seedling pears from Mr. Christopher Wiegel, a German tree and fruit grower at Cleveland. They were both so good for their season that we at once made drawings, and then prosecuted enquiries as to their habits of growth, origin, &c.

Herewith we present drawings of the one

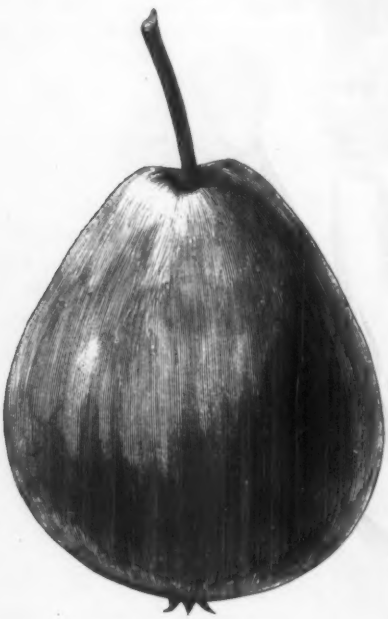

Fig. 43.—*Mary Pear.*

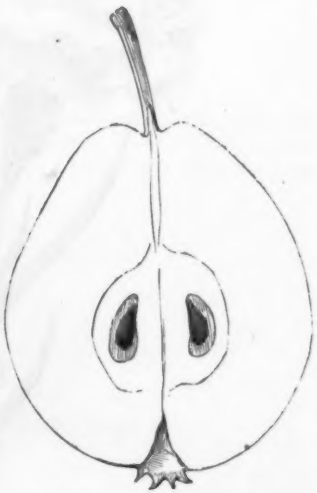

Fig. 44.—*Section.*

received by us as No. 1, and which Mr. Wiegel now names Mary.

Our drawings were made, as will be seen from two different specimens, with a view to get the mean size. The history of this pear is, that Mr. Wiegel, some years since, planted seeds, he thinks, of Seckel pear, and from the trees grown selected two to keep, because of their early coming into bearing, their upright vigorous habits of growth, profuse bearing, and good quality of fruit.

The tree of Mary is upright, vigorous in growth; young wood, yellowish red, smooth, and short-jointed; buds prominent, with a leaf partaking of combined character of Seckel and Flemish Beauty. In bearing, its fruit hangs in clusters all along the limbs on short spurs, and its productiveness is second to none. The fruit is usually a

little below medium size; form generally globular obtuse, pyriform, occasionally one-sided; *stem*, three-quarters of an inch long, moderately stout, slightly curved, and planted in a narrow angular cavity; *calyx*, rather large; *segment*, erect, or nearly so; *basin*, broad, very shallow, almost imperceptible in many specimens; *color*, rich pale yellow, mostly overspread and dotted with bright rich red, becoming deep red next the calyx, and showing small grey dots, occasionally a little russet near the stem; *flesh*, white, finely granulated, almost buttery, juicy, sweet, "very good" even to the seeds; *core*, small, eatable; *seeds*, rich brown; *season*, before the Madelaine, or early to middle of July.

As a market as well as amateur sort, this pear promises well, and should at once go into hands of pear-growers, for trial in different sections of the State.

We shall give cut and description of the other variety in our next.

THE READING PEAR.

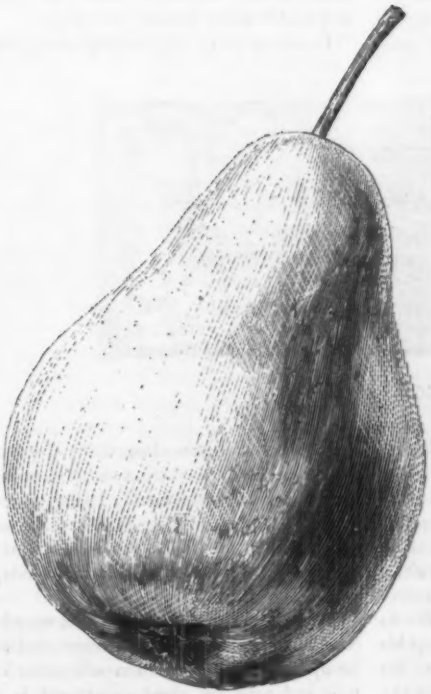

Fig. 45.—*Reading Pear.*

We have received fine specimens of this winter pear from W. Kessler, Esq., of Reading, Penn., who furnishes us with the following description:—Has been known for eighty years past in Oley township, Berks Co., Penn., where it is now extensively grown. Tree, vigorous, and a remarkably fine bearer. Fruit large, elongated, obtuse pyriform, angular and ribbed. Skin yellow, thickly dotted with brown and gray dots, and sprinkled with russet. Stalk long, curved, enlarged and ribbed at its insertion, generally in a depression. Calyx open; segments strong, in an exceedingly shallow basin. Flesh whitish, granular, melting, with a brisk, vinous flavor. Season, January to March.

PLAN FOR IMPROVEMENT OF GROUNDS.

BY EUG. A. BAUMANN, LANDSCAPE GARDENER, RAHWAY, N. J.

I send a design I have laid out in the vicinity of New York, and which is already grown up sufficiently to show the effect of a systematic grouping, the most important object in laying out and beautifying a Country Seat.

This plan, located some two miles off the station of Mamaroneck, Westchester Co., on the New Haven R. R., between several other handsome country seats, lies on Long Island Sound.

When its owner, Wm. G. Read, Esq., gave me orders to remodel it, I found the cottage, stables, vegetable garden and orchards established, but bordering on both sides on a long, straight and quite narrow approach, leading from the gate to the front of the cottage.

On the said front, wherefrom the ground slopes down on two sides, the natural shape of the land had been left untouched, and without any regard to convenience and beauty, there was a turn in the road around a regular oval, of about 15 or 16 feet wide.

On this turn, the place where the road touches the house, it was at the right elevation; but below the oval, simply designed on the slope, the road was nearly four feet below the upper level, and you had to drive from the door down-hill around the oval, and up-hill again to reach the drive.

It was an every day's arrangement, good

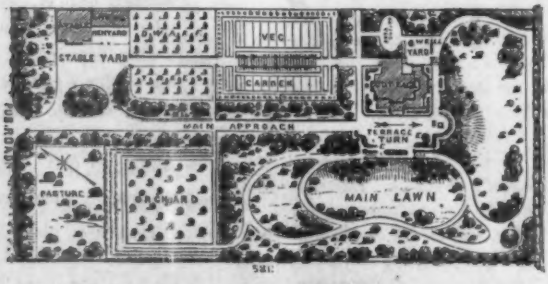

FIG. 46.—*Plan of Grounds.*

enough on a level ground; but with such a slope the consequence was, that every shower carried all the gravel from the house behind the oval, undermining this as frequently, and carrying all this stuff on top of the lawn below, which, therefore, could never be kept in a decent order. This was one of the greatest troubles to the gardener. It took more to keep his drive in front of the house, as well as his lawn, in order, than the balance of the whole place.

The stable-yard, the pasture lot, orchard, small-fruit trees and vegetable garden reached only a few feet from the drive; the stable-yard was open altogether; the balance was embellished by a double row of various sorts of trees, hardly 12 feet apart, across the drive, shading this, but leaving a full view of all kinds of crops that may not be always pleasing in a small country seat.

The remnant of the plan, which may be considered now as the pleasure-ground or lawn, was planted with a collection of trees and very few shrubs, scattered in a very irregular way all over the place, showing trees everywhere without harmony or connection. There was no dense shade nor open lawn, with circulation of air, and the

lawn, besides not being drained, in place of having fine, smooth grass, had more the appearance of a swamp in some places, and in others more moss than grass.

I took charge of the place for the very small sum of $650, for carrying out everything in the line of gardening, and altered the place according to this plan.

1st. The main approach was widened to 14 feet, and correctly graded, and on both sides a border of over 20 feet wide was trenched and prepared for a collection of trees and shrubs mixed, ornamenting the drive, and hiding the vegetable garden, orchard and pasture grounds.

Between the stable-yard and the drive, a bold group of evergreens was established, to hide it from persons driving by, but leaving it accessible from both directions.

2d. In front of the house there was a terrace established, wide enough to allow the turning of carriages, and as far as the banks were high enough, an iron railing, 3 feet high, was put up to define correctly the regular outlines of said terrace.

The corners of the terrace, outside of the space required for wheeling around, were employed for some flower-beds; the railing itself was intended to support a large display of climbers, and in the semi-circular projection at B, in the very centre of the approach, there was a piece of statuary, or some seats or benches intruded, with a full view along the drive on one side, and on the Sound on the other.

As it will be noticed on the design, the planting around this terrace is intended to make it more prominent still. Openings from the circular projection, and opposite the front of the house and the bay window, have been managed; and so as to make them more conspicuous, the intervals have been stocked with evergreen trees.

3d. The trees already on the place, mostly of the leading varieties, or rather the more common varieties met in nurseries, scattered all over the place without idea of grouping, without any idea of harmony of size, foliage or color—were all removed and planted according to the wants of the place, the most important one being to bring near-relatives together in groups, and to leave open lawns on which the grass could grow.

Most of these trees, being of large growing sorts, had to be employed on the outskirts of the place, and partly in the rear of the borders along the main avenue.

Trees of smaller size, and flowering shrubs had to be employed in front of them, so as to close up the groups with a diversity of foliage that developed itself from the tops of the tall trees in the rear, down to the grass in front of them. Thus were formed dense groups and belts framing the lawn, and arranged in such a way that hardly one variety was employed that could not be seen from one or more places.

The openings left, having their sides treated in the same way, were made thus more natural and more conspicuous.

Scattered over the lawn, single specimens of rarer varieties have been planted at such distances from the paths, that they can be noticed everywhere; if planted among the groups or belts they would be lost.

4th. The main approach has received a new, correct grade from the main entrance up to the terrace. The walks have been altogether graded, stoned, and drains managed under them, carrying off all the standing water.

All the places occupied by trees were well trenched, at over 2 feet depth; the lawn well graded and spaded 10 to 12 inches deep, and now there is fine grass on it.

I saw this place in the latter part of November last, when the foliage had dropped, but notwithstanding, I felt a great satisfaction, and so far so much of a success, to think it worth while to send you the drawing of it, made from memory alone, and therefore, perhaps, not quite correct in all the proportions.

Mr. Wm. G. Read furnished all such articles that were not in the gardening

line; the iron railing cost (iron was cheaper then) about $400, put up and painted. Some other expenses for the frames, gravel, stones, sods and a summer-house of rustic work, at A, may have cost some $400 more. All included, I suppose the whole improvement did not exceed $1,500 or $1,600, and I know from Mr. Read himself that he does not regret it, as he was offered a very large profit on the place as soon as it was done.

NOTES ON THE JANUARY NUMBER.

Although unable to write notes on the two last numbers of the HORTICULTURIST for 1865, I assure the writers I read them with much pleasure; and to some I really felt that I wanted to add a word, not that what I might add would of itself be of any great value, but that a hint here, and a question there, often sets "one a-thinking," and occasionally draws out mind where the owner himself know not of its extent.

In compliance with a courteous request of the Editors, I propose, during the coming year, to read, monthly, the HORTICULTURIST, and jot down such thoughts as its valuable articles may suggest. Should my plain manner occasionally seem harsh, I trust no offence will be taken, as the intention will be to encourage and assist rather than to criticise.

The January number comes replete with most valuable matter, and as the Editors have given us notice that only practical matter will be admitted, we must, in our writings, as in our labors, keep the *object* steadily in view, and although we may be criticised by book-makers and those who work by the book, yet, should we "not do all at once," if, at the end of the year, we have studied out some new system, or proven the fallacy or truth of some old commendation, we shall feel that our time has not been entirely lost.

ON NOT DOING ALL AT ONCE.—"Graduated progress is essential to all rational enjoyment," says the writer. Let me add that progress in Horticultural or Agricultural matters has never been witnessed in the labors of those who go by the book. It is the true lover of rural life—the enthusiast, if you will, in Horticulture and kindred pursuits, to whom we are indebted for the progress that now yearly, almost daily, marks the rural life of this country and has already placed us, in many things, far in advance of older countries, where the working talent is mainly confined to system and books. During nearly thirty years of observation, I find that only those imbued with an enthusiastic love of fruit and flower, tree and shrub, &c.—such men as Wilder, Kirtland, Dana, &c.,—accomplish or attempt much that lays out of a direct line of truisms laid down in the books.

Let no man fear being too enthusiastic in rural pursuits; it may not always add to his bank account, but he will lay up a store of enjoyment not to be purchased with money.

To the remark, that "most planters are afraid of the axe," I must give a hearty assent; for in a practice of years, cutting away has been one of the most difficult things that I have had to contend with in the advisement for the improvement of grounds.

HOW TO REMODEL AN OLD FARM HOUSE.—A good representation of what is often being done; and could our farming people be woke up to a tithe of taste, such re-modelings would increase until, instead of tasteless, though comfortable, houses, our farm residences would become pleasing structures ever to be remembered by the outgoing children in connection with their fire-side associations. The farming community, as a whole, are rich, and now is the time to

urge upon them to use the taste of some other than their village carpenter in the construction of their buildings.

My Neighbors and Myself.—A pleasant record of a New Jersey neighborhood that might be fitted for many other locations. I hope no grape-grower will take his record of the manner of growing grapes as a method to be adopted; it smacks too much of past ages, and returns to mildews, rank, spongy and tender wood, &c.

Grapes in 1865.—Coming, as this article does, from one who claims knowledge upon the subject of grapes, I am surprised at it. All Horticulturists, I believe, acknowledge that years are requisite to prove the value of new fruits, and especially of the grape; but here, in a list of sorts advised for "*profit*," are varieties that two years since were hardly known, and as yet have been fruited in only very few places. The assertion that grapes, like other fruits, will grow in any good soil, is all right, but to assert that an equal *quality* of grape can be grown in any soil, is simply to belie the teachings of all the past and present. I like to see a man strike out bold, and must, therefore, compliment the writer on that part, and suggest that he be ready, for I ween he may have to hear of others writing on grapes and giving some different views.

What Not to Do.—Here is the kernel in a nut-shell—a short article—and besides telling what not to do, the writer gives two plain, practical items on drainage and making cuttings that, to one who has been accustomed to go by the book, are worth the year's cost of this journal. As Mr. Henderson says, it is worth as much to be able to steer clear of the rocks other practitioners have blundered on, as to have directions how to proceed. The last are all written, but the blunders are not often told by those who err.

Longevity of Trees.—As a rule, few know anything of the natural age of trees, and especially of the exceptions where specimens have weathered the storms of hundreds of years. To all such this article will be one of great interest.

Plan for Laying out a Square Acre.—A very good plan, but I fear not as often practical as one would be where the same amount of land is embraced in one-half the width and double the depth. Suppose the author gives one in that proportion. To this plan I suggest, however, the change from gravel around the house to smooth, green turf. The turf reflects heat less in summer, is quite as cleanly for children to play on, and gives a better relief to the elevation of the house. One more suggestion—some place for a cow-paddock; for if "one acre" is "enough," a cow must be provided for. It is a great item in the expense of a poor man's family. The question of quantity of land, as to how much is enough, I reckon depends very much on the owner's views of expenditure, as well as capacity to take charge of it. I know one man who, from a lot twenty-three feet wide, and one hundred and twenty deep, whereon is placed his dwelling, realized, the past year, three hundred and twenty dollars, from sales, and with this amount and the use of his surplus crops, considers it enough for his wants.

Gardens and Parks in Germany.—It always does me good to read of the German manner of universal enjoyment, and while reading this article, I imagined myself sitting beside the various groups on the turf, as I have often done in this country. As the writer says, in this country all public gardens are of some private enterprise, or possibly of Corporation ownership, where so many officials in "brief authority" hold sway, that, in a measure, part of the enjoyment is lost. St. Louis, Mo., probably, has more places of amusement and recreation, after the family system of the Germans, than any other city in the United States, and there I have often passed a pleasant hour in what too strict disciplinarians call "beer gardens." Americans, as a nation, are money-seekers—ever working, never resting, but like other na-

tions, winding up their mortal coils with a similar result—i.e., inanimate matter.

A Trip to Vineland.—Ah! here is what we want. Every journal has been issuing call, by way of advertisement, for settlers, until too many of us have come to look upon the item as one in which the advertiser kept the best end of the bargain. Now we have a reliable account, and from one having, as may be presumed, no "axe to grind." The location of New Jersey, between two of the largest cities in the States, possesses undoubtedly better market facilities than any other section of our country. The highest prices are at once at command of the grower of fruit or produce, no deduction has to be made, as in many sections west, on account of transportation, &c.; but, while conceding all favorable to New Jersey, it is not quite fair to decry other sections. Most of the new towns of the West have equal advantages of "good society;" they also possess "places of worship," and their children, judging from the records of the numbers in each State that do and do not read and write, have at least equal "advantages of education at small expense." It is not every man that is fitted for a gardening life, or that would be satisfied with ten or twenty acres, and while New Jersey may offer inducements to the truck-grower, or grower of the small fruits, as strawberries, etc., he who would *farm* it in a strict agricultural sense will find his way west, and gain thereby.

To the man of small means, with a love of flower, fruit or vegetable growing, New Jersey offers extra inducements, for, fill it as rapidly as you may, and increase the quantities of fruits and vegetables ever so fast, New York and Philadelphia will still keep ahead in demand. Looking back upon peach-growing as an instance—when the Reybolds planted their orchards on the Delaware—we (then of New York city) congratulated ourselves that only a few years would elapse when we could buy peaches at a low price. But how has it been? At no time since 1840 have peaches sold in New York as cheap as they were previous to that time, and peach-growing is now more profitable than ever. The same may be said of all fruits, from the strawberry up. When the writer first commenced strawberry growing, he sold at an average of five cents per quart, and counted that profitable. Now, our poorest markets command seven to nine cents when the crops are contracted, and many growers receive from twenty to thirty cents per quart on an average. Fruit-growing to the Horticulturist, like stock and grain-growing to the Agriculturist, may be advised *ad infinitum*, and so long as man lives, the demand, with the price, will rather increase than diminish.

New Hybrid Pink.—From the description, this must be a valuable acquisition. The Rose, Pink, and Verbena have always been pets of the writer, and no one thing ever gave more satisfaction than a bed of Picotee pinks of some sixty varieties, when in bloom.

Reuben.

DIAGONAL TRAINING IN VINEYARD CULTURE.—I.

BY D. M. BALCH, SALEM, MASS.

At the risk of being considered tedious, we mean to venture a few remarks on the trite but important subject of vine-training, and to propose a method, which, as far as we know, has never been practiced, but which seems to fulfil certain requirements, and may prove valuable.

It is our belief that there is no one division of viticulture of so much consequence as the proper training of the vine; for on this depends, in a great measure, the health and duration of the vineyard, the quantity and quality of its products, and the recompense it shall bestow upon the cultivator for his toil.

The many systems that have been, or are

now in vogue, are valuable by as much as they coincide with, or depart from, certain laws of vegetable growth, which we can not infringe with impunity; for the fact that the vine, having a facile nature, can accommodate itself to circumstances, is no argument that it will not be restive under ill treatment, or, on the other hand, grateful for intelligent care. These systems allow the vineyardist the utmost latitude for selection, and free scope for the exercise of his judgment; for in a single day's travel among the vines one can see the application of numerous methods, involving all grades intermediate between a dense mass of foliage excluding air and light, and on the other hand, a mere network of branches and clusters, half shaded by a few scrofulous-looking leaves. One enthusiast, taking Nature as his guide, would permit his vines to wander, as in their native woods, among the boughs of lofty trees, untouched by pruning-knife, and unrestrained in their luxuriance; while another pictures in his mind the theoretical vine as a short staff, more or less straight, and furnished at regular intervals with rich heavy clusters.—But the leaves? Well, he admits that a few are necessary; and so arbitrarily limits each vine to a certain number, one or two beyond the fruit, and these he is determined it shall not exceed, if he can prevent it. The former is rational at least, for Nature is a true mistress, and will not lead her votaries astray; but he defeats certain great aims and objects of vine-training to have the crop within easy reach, to keep it there, and to economise space. But the latter is irrational. Working out his theory with thumb-nail and pruning knife, he transgresses natural laws, is continually sapping the vigor of his vines, and will be deservingly punished with unripe fruit, and wage unceasing warfare on that species of vegetable marasmus, mildew: *vineta sua cædit.*

Against close pruning and defoliating the vine, the following conclusions of Schleiden are a very strong argument; plants in a state of cultivation are predisposed to disease, that is, they are more susceptible of morbific influences than in their normal condition, since we seek, by a peculiar mode of treatment, to develop certain structures, or to increase certain constituents inordinately, and thus overthrow the natural equilibrium: "The general morbid condition produced by cultivation is heightened into specific predisposition to disease when the conditions of cultivation are opposed too strongly, or too suddenly, to those of Nature."—Now, Nature has not provided each cluster of grapes, like the apple, pear, cherry, and indeed most fruits, with a small bunch of leaves, but has placed it near the base of a free-growing branch, which keeps ever extending as its fruit approaches maturity.—What, then, we ask, can be more unnatural than the restricting this branch to two or three leaves beyond the fruit it is striving to perfect, and persistently checking each attempt that the vine makes to repair the injury? We thus give the plant a shock that it feels, no doubt, in the uttermost rootlets, and deprive it of the very organs it most needs. What wonder, then, if mildew, be it a cause or a consequence of disease, is so prevalent among the vines, and half-ripened fruit so abundant in the market?

It is well known that sap tends to the extremities, and while flowing freely through a branch, causes a vigorous growth, most of the buds producing twigs; but when we check its flow by bending down, twisting, or otherwise manipulating the branch, it thickens, and induces the incipient wood-buds to blossom. In most systems of vine-training, the fruiting cane is fastened either vertically or horizontally; in the former, we have to fear that the uppermost laterals will be over-stimulated at the expense of those near the base; and in the latter, that the growth of the laterals will be too vigorous on account of their vertical position. Training at an angle of 45° has been found very favorable for the production of both foliage and fruit (see the writings of Bréhaut and others), and it is our intention in

this paper to apply this method of training, "diagonal," or "*en cordon oblique*," to the vine, modifying it somewhat to meet certain conditions.

A practical system of culture for the vineyard should keep all parts of the vine within easy reach, occupy all the ground and trellis-space advantageously, provide for the annual renewal of certain portions of the vine, not infringe too rashly upon its natural habit, and, as far as possible, ensure ripe fruit and healthy foliage, without extraordinary skill or tedious supervision.

It is not our purpose to write an essay on the cultivation of the vine, so, passing over without comment the selecting and locating a vineyard, and the preparation of its soil, about which so much has been said and written that the subject seems nearly exhausted, and yet, strange to say, few agree, we turn at once to our theme—the vine itself.

The condition of the vine at planting is of the greatest importance. If its constitution has been debilitated, whether by springing from an unhealthy parent or from neglect in infancy, extra care and attention will not succeed in rearing from it a hardy and healthy plant, and our hopes for its future are vain. The large planter who extends his vineyard year by year, will probably raise his own stock, and can watch over it from the bud; but the beginner will have to content himself with purchased vines. These, if obtained from reliable parties, and of the first quality, will usually do well; but it is a good plan for him to establish a nursery, in which he can give his purchased vines a year's growth, to recover from the effects of transplantation and transportation, and exhibit their vigor.—This nursery may be, like the vineyard, a bed of sandy loam, deeply worked, and only moderately fertile, since it is not our purpose to force the vines, but give them a healthy start, and, by a little care and attention, accustom them to their new locality. In the Fall, all weaklings ought to be destroyed, and the strong plants transferred to the vineyard. A vine with three or four feet of short-jointed wood, exceeding one-fourth inch in diameter, may be considered suitable for permanent planting; and if this be carefully raised, and as carefully reset, it scarcely feels the shock of removal; our vine is then cut down to six or eight eyes, and a slight mound of earth heaped over stalk and roots for winter protection.

With returning Spring, the buds will start, and most of them may be suffered to grow at random, for the growth below ground will match that above, and plenty of roots are needed for next year's work.—The surface of the ground should be well worked during the growing season, and lightly top-dressed in the autumn; the vines cut down to three or four eyes, and covered with a mound of earth. These directions serve only for the establishment of strong healthy vines, and are applicable to all systems of training, which commence in the second or third spring, as the case may be.

We will now describe the system of "Diagonal Cordons" as concisely as possible:

We have planted our vines forty inches apart (some strong growers may require four feet), in rows eight feet apart, treated them as above described, and have them now pruned to three or four eyes, and covered with earth, waiting for spring. At the proper time, we uncover the vines, and from buds about six inches from the ground allow two shoots to grow, the weaker of which is to be stopped at about the sixth leaf, and not suffered to extend much further; but the stronger trained upward to a temporary stake, and permitted to grow unchecked till autumn, merely stopping once or twice over-vigorous laterals, as it is our purpose to grow a long stout cane. In the Fall, this cane, which ought to carry ten or twelve feet of ripe, short-jointed wood, half an inch in diameter, is cut into eight feet, and the short cane to two buds. We may cover or not, as one pleases, this

winter; the vines are now well-established, and if the soil has not been so rich as to force a rank succulent growth, but the wood is healthy and well ripened, they ought to be in a condition to stand the vicissitudes of climate in most localities where a grape can be raised largely to advantage.

Early next spring, the trellises may be built. Posts are set 13½ feet, or 16 feet, apart, so as to enclose four vines between each pair of posts. To these, horizontal pieces are spiked, one at seven, the other at one foot from the ground. The slats are about one inch square, and are nailed to the horizontals at an angle of 45°, and twenty inches, or two feet apart from centre to centre.

GARDENS AND PARKS OF GERMANY.—*Continued.*

Upon these streets, which are broad, well paved, and lined with trees, the houses are mostly set some distance back, with lawns in front, and often upon one or both sides of them. The fences are generally of iron, while back of these run beautiful arbor-vitae, fir, or box hedges. The walks are generally bordered with beautiful flower-beds and low hedges of box. They are either gravelled, or covered with a beautiful fine quartz sand, of a yellowish hue. The turf is kept closely shaven, and is adorned here and there with some fine evergreen, some bronze group or crystal fountain.—You see a great deal of ivy trained over arbors or the walls of the buildings, while sometimes you see it growing intertwined with hedges. Verandahs and balconies are very common, and these are often covered with luxuriant vines. Here and there you see large bay windows, filled with a profusion of brilliant plants, many growing down from hanging baskets to meet their companions on the stand below.

The wealthy Berliners pay much attention to their hot-houses and conservatories, many of which are filled with the rarest exotics. It is a favorite practice with them to bring their conservatories out into their grounds in summer, and, placing hundreds of pots together, to build up pyramids of floral splendor and artistic taste on their front lawns, or often on the spacious steps which lead up to their mansions. The effect thus produced is one of wonderful beauty, as you pass by one after another these floral displays, each seeming to surpass the other in magnificence. The elegant mansions, the green lawns, the clear fountains, the trim hedges, the marble and bronze groups, all uniting to form a fitting accompaniment to these rainbow-hued groups of Nature's most cunning handiwork.

In the suburbs of Berlin is an immense locomotive manufactory, employing several thousand workmen. The founder of the establishment, Mr. Borsig, was an amateur botanist of great reputation, and expended large sums of money in his botanical pursuits. He has passed away, but his son still keeps up the gardens. It is not so much the grounds, as the hot-houses, the green-houses, the pinery, and the palm-house, which renders this place almost without an equal.

When I first entered the principal green-house, the effect was wonderful, was amazing. I stood and looked in silence upon the scene before me. You see before you a forest of Camellias and Azaleas in the fullest bloom, artistically arranged in a semicircle, rising up many feet, to meet a a gallery along whose walls beautiful Camellias, trained like vines, formed a living tapestry. The ground was carpeted with a most delicate moss, studded with fair primroses. In the centre an exquisite fountain of the purest white marble, crowned with a

lovely statue, gave a completeness to the whole. The air was fragrant and cooling; the scene one of the quietest beauty, nought breaking the silence, save the rippling of the fountain—which alone seemed pure enough to commune with the silent wonders of God's creation round about. Passing to the next apartment, through a large archway verdant with climbing vines, a profusion of splendid Magnolias, rododendrons, and exquisite plants unknown to me, reared their proud flower-crowned crests above and around us, seeming to flourish in all their native vigor and beauty. As a centerpiece, a singularly graceful New Zealand Cypress, rose high above its gayer companions, and then bending in graceful curves, swept the very ground with its drooping tresses. All around us upon stands, were the rarest green-house plants, and the most perfect specimens of the familiar hyacinth, and tulip, lily and salvia. Further on was a third apartment, where a fine collection of delicate ferns, some of great size, rose from a bed of greenest moss. Now leaving the green-house, you pass through a corridor containing an Eden of beautiful flowers, and enter the palm-house. This is in keeping with the rest of the establishment, and is hardly to be surpassed.

It is not so extensive as some I have seen, but it is by far the best arranged. It is laid out in tasteful walks and contains several fountains. No where have I seen the strange and gigantic creepers of the tropics, so tastefully trained. One of the finest existing specimens of a singular creeper called the philodendron, was here trained up an artificial rock, for more than twenty feet. Its stem was four or five inches in diameter, and its digitated leaves of a dark glossy green, more than eight inches in breadth. All around rose luxuriant fan-shaped palms, giant cactaceae, and immense-leaved bananas. Everything looked strange, everything looked tropical. The strange vines, and parasitical plants, the gorgeous-leaved spæcrogynes, the towering bamboo and monster fern, all seemed whispering to us of their far off sunny climes. Not the least interesting to me was the house of the Orchidaceae.

This was a large hot-house, devoted to rare exotics, many of them belonging to the same class as the common orchid.

The building was about 250 feet in length, and constructed of glass and iron. The collection cost originally $30,000, and was once one of the rarest and most extensive in Europe. The young botanist who was then in charge of it was a friend of mine, and it was only through him that I gained admittance to it, as it was not open to the public. Under his superintendance the plants which had been very much neglected under his predecessor, were undergoing a thorough course of treatment.

All of these exotics require the tenderest care, and the greatest watchfulness, in order to keep them vigorous. If neglected they soon sicken, become blighted, and cease to blossom. The atmosphere requires to be kept very warm and moist, the temperature averaging 80 degs. The greatest enemies of these children of the tropics are insects, and from these they have to be zealously guarded. A large number of these plants seem to grow mostly from air and moisture, and are potted in soft moss. Others dwelt in hanging baskets filled with moss, and struck out vigorous air roots through their openwork receptacles, which like the locks of Medusa, seemed living and moving though objects of beauty and not of horror, for from them burst forth strange and beautiful blossoms, some of which shaped like butterflies, as bright and frail, swayed to and fro with the least breath of air. Here were, perhaps, some twenty varieties of the Calceolaria or Moccasin plant, whose singular yellow or pink Mocassin-shaped blossoms, as it grows with us, is known to you all.

Here were assembled many curious and beautiful varieties unknown to northern climes. Most of them were almost as remarkable for the beauty of their leaves as

for that of their blossoms. One from the Philippine Islands, had a very pretty spotted leaf, resembling on a large scale, that of our wild Adderstongue. The blossom of one was red and white, beautifully variegated; that of another, from Borneo, of a strange glossy green; while that of a third was of so dark a purple as to seem almost black. Some of the other orchidaceæ were most magnificent, such as the Vanda Suavis of Java, with its superb spikes of white blossoms, studded with purple, or the Brassavola of Honduras, with its fringed flower of purest white. And here were also many strange Nepenthes, relatives of our Pare's Hillpitcher-plants, gathered together by adventurous botanists from Brazil, the East Indies, and the islands of the Southern Sea. With us the pitchers form a part of the leaf, but with most of the foreigners the pitchers were independent, connected only by a slight stem three or four inches in length, to an oval leaf. In one case the pitchers, all about the size of thimbles, grew upon the stem of the plant itself. Many of these plants grew like vines, and were trained for many feet over trellises. The subtile aroma of these fair flowers, combined with the moisture-ladened steaming atmosphere, produced an oppressive strange sensation, dreamlike, trance-conducive. And what must be the effect of such a vegetation as this in its native clime, among the "summer's isles of Eden, in dark purple spheres of sea." Mr. Borsig's place was small, but a gem, and a head gardener and some twenty men were engaged in caring for it. The grounds were tastefully laid out, and contained many of the rarest evergreens and shrubs, some of which had to be kept during the winter, in an immense greenhouse fitted up for the purpose. Naught could be more pleasant to one tired of the noise and dust of the city, than to make a visit here. To feast one's eyes upon the wondrous flowers and plants; and, strolling through the grounds, to recline under the fine old trees, and to listen to the sweet strains of the nightingale who sang nowhere sweeter than here.

"GREELY PRIZES."

The Committee appointed to award the Greely Prizes on apples and pears, met for that purpose at the residence of William S. Carpenter, Esq., New York, on Dec. 12th, at 3 o'clock, P.M.

All the members were present. After the Chairman, Dr. Warder, called the meeting to order, the Secretary, P. T. Quinn, read the minutes of the previous meeting, which were accepted.

The Committee regret to state that, although the time for the action of the Committee has been delayed for more than a year, in the hope that a more liberal response would be made by fruit-growers in forwarding choice varieties for competition, the following is a list of the varieties presented for examination:

Apples.—*Hubbardston's Non Such, Fallawater, Swaar, Baldwin, Tompkins Co. King, Rhode Island Greening, Northern Spy, Winter Pippin*, and three varieties of *Seedlings*.

Pears.—*Bartlett, Lawrence, Duchesse d'Angouleme, Dana's Hovey, Sheldon, Beurre d'Anjou*, and *Louise Bonne de Jersey*.

For the information of those interested in the awarding of these premiums, the Committee desire to incorporate in their report the portion of Mr. Greely's original offer, relating to the apple and pear.

After speaking of the purpose he had in view, Mr. G. says:—"I offer $100 for the best bushel of apples, which combine general excellence with the quality of keeping in good condition until the 1st of February, and is adapted to the climate and soil of the Northern and middle States.

It is not required that the apple submit-

ted be new, but it is hoped that one may be found which combines the better characteristics of such popular favorites as the Northern Spy, Baldwin, R. I. Greening, Newtown Pippin, or a majority of them. Let us see if there is not a better apple than the established favorites; if not, let us acknowledge, and act on the truth.

I further offer a premium of $100 for the best bushel of Pears, of a specific variety, size, flavor, season, &c. It must be a pear adapted to general cultivation. It need not be a new sort, provided it be unquestionably superior; but one object of the premium is to develop unacknowledged excellence, if such shall be found to exist.

One object of the premiums is to afford a landmark for fruit-growers, in gardens and small farms, who are now bewildered by the multiplicity of sorts challenging their attention, each setting up claims to its unapproachable excellence.

I leave the determination of all questions, which may arise as to the propriety of making a prompt award, or waiting further developments, entirely to the appropriate department of the Institute.

Signed, HORACE GREELEY.."

The Chairman, Dr. WARDER, made some interesting remarks, setting forth the embarrassing circumstances under which the Committee were called to the discharge of the duty devolving upon them, growing out of the fact that many of our best fruits have their locality in which alone their characteristic excellencies are developed. And hence the apple or pear, regarded the best in one locality, may prove an indifferent fruit in another. But adaptation to the entire range of the Northern and Middle States, with healthfulness of habit in both tree and foliage, as well as size, flavor, and season of fruit, is demanded by the requirements.

The first ballot gave Hubbardston Non-Such 3, Baldwin 2, Tompkins Co. King 1; the chairman not voting. After a full and free discussion of the comparative merits of these and other varieties, the Hubbardston was ruled out, as not meeting the requirements of Mr. Greely, in keeping in good condition until the 1st of February.

On the third ballot, the vote was, for the Baldwin four; for the Rhode Island Greening three. Whereupon the Chairman declared the Baldwin to be the choice of the Committee. Messrs. Downing, Ward, Sylvester, and Ferris, for Baldwin; and Messrs. Warder, Carpenter and Quinn; for R. I. Greening.

In the selection of a pear, from the list of candidates above named, the ballot was made, as in the case of the apple, without consultation. The first ballot gave the Bartlett four and Sheldon three. The Chairman declared the Bartlett to be the pear. Messrs. Downing, Ward, Sylvester and Ferris, for Bartlett; Messrs. Warder, Carpenter, and Quinn, for the Sheldon.

It was then determined that the Committee should select, by ballot, six varieties of apples and six varieties of pears for general cultivation, comprising two Summer, two Fall and two Winter varieties. Mr. Hovey, of Boston, who was present, was invited to take part in the vote.

It was a matter of surprise when the result of the first ballot was read by the Secretary. Without consultation for the two Summer fruits, the vote was as follows:

APPLES.

Summer—Primate, 6; Red Astrachan, 5.

Fall—Porter, 6; Gravenstein, 6.

Winter — Hubbardston Non-Such, 6; Northern Spy, 5.

PEARS.

Summer— Manning's Elizabeth, 5; Rosteizer, 5.

Fall—Sheldon, 8; Seckel, 6.

Winter—Lawrence, 7; Dana's Hovey, 5.

The following resolution was then read and unanimously adopted:

"*Whereas*, in consequence of the reading of a communication from P. B. Mead, published in the *Tribune*, a question has arisen in regard to the action of this Committee as to the postponement of the award of the grape premium,—therefore,

Resolved—That we do reaffirm the action had at the meeting in September last, when it was agreed, in concurrence with the expressed wishes of Mr. Greely, and in what we believe to have been the unanimous judgment of this Committee, that we should defer action until a future period."

It was gratifying to the Committee to examine such choice lots of Winter pears as were voluntarily sent to this meeting. Elwanger & Barry, of Rochester, New York, exhibited 30 varieties, which were highly creditable to them. Their yearly contributions of fruit add much interest to the annual exhibition of the Institute.

C. M. Hovey, of Boston, exhibited 27 varieties; many of them, new sorts, and all well grown.

Mr. H. is one of the early friends of horticulture in this country, and his collections of fruit at the Institute Fairs have always attracted attention.

Wm. L. Ferris, of Throgg's Neck, exhibited seven varieties of Winter pears. Although less in number, they were not inferior in quality, but on the contrary, most creditable to the grower.

Isaac Buchannan presented one variety, and George Bancroft, the historian, exhibited two varieties. Mr. B. is a zealous friend of horticulture, and will soon have an extensive pear orchard at his place at Newport.

It was moved and adopted, that the Committee adjourn, to meet at the Fall exhibition of the Institute, to be held September, 1866. The time and place Mr. Carpenter would make known to the members.

Before closing this report it is our pleasant duty to render, on behalf of the Committee, a hearty acknowledgment to Mr. Carpenter, at whose residence the meetings were held. Though grateful resolutions were duly passed at the last meeting, the friendly and generous hospitality of our host is firmly impressed upon the minds of those who, in fulfilling the trust confided in them, felt their task lightened and supported by Mr. Carpenter's co-operation and gentlemanly liberality.

Not only horticulturists, but that vast horticultural society, the public, are deeply indebted to Mr. Greely for the interest awakened by this entire movement. That its results will prove beneficial none can doubt; but Mr. Greely's offer assumes even more importance when considered in the light of an initiatory idea.

When those burdened and surrounded by manifold public responsibilities can take an active part in special developments of horticulture, it behooves men of influence, possessed of abundant leisure and ample means, to take a hint from the "Greely Prizes."

JOHN A. WARDER, Chairman.
P. T. QUINN, Secretary.

John A. Warder.	Charles Downing.
I. M. Ward.	Wm. S. Carpenter.
Wm. L. Ferris.	P. T. Quinn.
E. W. Sylvester.	

APPLES AND PEARS.

THE result of the deliberations of such men as composed the committee appointed under the auspices of the American Institute, to award the Greely Prizes (as reported in the HORTICULTURIST for January, with reference to apples and pears), is one of more than usual importance. It is plainly within the province of the HORTICULTURIST as a magazine, and the horticulturist as an individual, to call particular attention to it, at this time, as one of the guides which may safely be taken with refer-

ence to tree-planting during the ensuing spring.

The reputation of all the apples named is so well established, that the list, so far as it goes, would, doubtless, be accepted by acclamation by any pomological association.

The list of pears is especially noticeable and commendable, for the prominence which is given to those of domestic origin. Those who, like the writer of this, have planted, replanted, and transplanted; grafted, re-grafted, budded, and double-worked a variety of foreign pears—and, generally, with but indifferent success—will be disposed to join in the wish that they had been favored with such advice twenty years ago; and unite in commending it with all its brevity, to those who have neither time nor means to throw away in experimental pear culture.

Wherever a particular apple or pear has a first-class local reputation, any fruit-grower would, with the greatest propriety, substitute it in, or add it to, any list for general cultivation, however highly recommended as a whole. For instance, the Pinneo Pear so-called, (but miscalled the Boston, in certain localities in New England), would be planted as a summer pear in place of the Rostiezer. So, too, the Roxbury Russet—a well-known and highly popular late keeping apple—would still be retained by many, as the dominant fifth in the harmony which embraces the Early Harvest, the Golden Sweet, the Baldwin, and the Rhode Island Greening.

The Primate, by the way, is the apple alluded to, and partially described, in the Horticulturist (vol. 14; p. 471), as the North American Best. It came, originally, from New Jersey, and was first brought prominently to the notice of the horticultural world by means of a communication in Hovey's Magazine, in 1850, accompanied with an editorial description and outline engraving of the fruit. It is exceedingly popular, and widely disseminated in this vicinity.

The Dana's Hovey Pear—which finds itself so suddenly elevated by the action of the committee, to its present high rank among the select few—is of comparatively recent introduction, and its credentials are herewith annexed; more especially for the benefit of the younger members of "our parish," for whom, in fact, this brief article is particularly penned.

We quote from the Magazine of Horticulture (vol. 25; No. 5):—"This most remarkable production is undoubtedly the richest pear known. To say that it is as good as the Seckel would be praise enough; but it is more than this. It has not the spicy aroma of that old pear, but it has what is more luscious—a peculiar nectar of its own, unsurpassed, and apparently unapproachable—a refined compound of the aroma of all other pears—a sort of honeyed juice, delicately refreshing and luscious.—The tree is almost as remarkable as its fruit. It is a very vigorous, though not rapid grower, making stocky, short-jointed wood, like the Seckel. In habit, it is erect and pyramidal, like the Buffum. It is extremely hardy; its productiveness appears abundant, and its keeping qualities wonderful; never rotting at the core; and with proper care it may be had in eating up to the first of January. Ripe in November and December."

So rapidly has this variety strode into public favor, that it is now less than six years since its merits were recognised, and brought to notice by the Massachusetts Horticultural Society, by the bestowal of a gratuity and silver medal upon Mr. Dana for its production.

Note.—Our friend, J. O. Cose, suggests that it is sufficient proof of the excellence of the Dana's Hovey Pear that it has survived such a fulsomely eulogistic description, even as it stands abbreviated, as above.

Another humorous and poetical (?) friend thinks that "salt saved it," for he says that the description of an article for *sale* is, generally taken "cum grano *salis*."

EDITOR'S TABLE.

To Contributors and Others.—Address all Communications, for the Editorial and publishing departments, to Geo. E. & F. W. Woodward, 37 Park Row, New York.

The Delaware Grape.—This plate just published is the finest illustration of the Delaware Grape that has yet appeared in this country. We have had it prepared with great care, and confidently recommend it to all. On heavy plate paper, handsomely colored. Price, post paid, Three Dollars; or sent free to any subscriber who sends us two *new* subscriptions and Five Dollars, in addition to his own.

New England Farmer. — Published weekly, at Boston, Mass., by R. P. Eaton & Co.; Two Dollars and fifty cents per an num. Its contents are carefully prepared. Market reports full and complete, and as authority on all agricultural matters, has few equals. Its circulation is large, and we speak from experience when we say it is one of the best of advertising mediums. Look up their prospectus in our advertising columns, and add this paper to your list. No one loses anything, either in time or money, who pays for and reads all the leading Agricultural and Horticultural journals. The man who steadily goes backwards is the one who does not take a paper; his farm can be picked out as easily as oats from wheat.

Messrs. Editors.—I would be under obligations if you would give me some information relative to the construction of a dry house for a small orchard, say 200 trees; heating the same, &c.

James Y. Clemson, Caledonia, Ill.

Can any of our readers furnish us a sketch and description of a building suitable for the above purpose, for illustration.—Eds.

The Late Professor James J. Mapes.—Prof. Mapes, the eminent agriculturist, has passed from earth. Though he had attained the ripe age of sixty years, his death nevertheless strikes the community as premature. There was such a wealth of resource in the man, so much already performed, and so much still to be achieved, that the crown of his busy life seemed to be but the pledge of an ever youthful activity.

Settling, in 1846, upon a stony, barren tract of land near Newark, New Jersey, he, in time, through an improved and judicious system of culture, rendered it, as admitted by all, the most productive and successful farm of its size in the State. Meantime, he started an agricultural paper, which he continued to edit for fourteen years, when his failing health forced him to resign. He invented the rotary digger and subsoil plow, and other improved implements; advanced and promulgated many important theories and discoveries—among the most striking of which may be cited his theory of the Progression of Primaries in nature. He was among the first to advocate the formation of an Agricultural Bureau at Washington, the head of which should be a Cabinet officer, holding equal rank with the Secretaries of the other Departments; and in the course of three years delivered 150 lectures, analyzed the soils of over 200 farms successfully, advising their mode of culture; and probably wrote more on agriculture than any other man living.

Robert Reid, an eminent florist, died in this city on the 24th of December, 1865. Mr. Reid was a native of Scotland, and came to this country over fifteen years ago; he contented himself by following the business of a florist, and making a very large circle of true friends; but in earlier life he was a well-known character and used to contribute, as a writer, to some of the best hor-

ticultural literary publications in England. He was an honorary member of the London Horticultural Society, and could claim close companionship with such men as Dr. Lind ley, Sir W. J. Hooker, Robert Errington, Donald Beaton, J. C. Loudon, and Robert Thompson, all of whom are well known as authors, and have done more to raise horticulture to its present dignified standing than any other men. He was one of those veteran horticulturists that we can ill afford to part with.

Wine from the Clinton Grape.—We are indebted to Judge Woodward, of Reading, Penn., for a bottle of wine made from this grape by John Fehr, Esq., of that place. This wine bears much evidence of skill in its manufacture, which is more than can be said of the majority of native wines that have come under our notice. Though but one year old, it is already of fine flavor and body, and has a character quite distinct. The Clinton deserves a high rank as a wine-grape for those localities, where it can be thoroughly ripened.

Manure for Evergreens.—Years ago, we were taught that animal manures were injurious to evergreens; but for four or five years past, we have practiced, applying old, *well-rotted* barn-yard manure to evergreens of all sorts, and apparently with the best possible results. Our trees and shrubs grow vigorously, and put on a deeper, brighter green; while kalmias and rhododendrons flower more abundantly than in our old practice of leaf mold manuring.

The Root of the Grape Vine the Seat of Mildew, Rot, &c.—Dr. Schroeder, of Bloomington, Illinois, an extensive and successful grape-grower, asserts that rot, &c., may be prevented by renewing the vine yearly, by means of layers, and thus cause it to fruit from canes, the roots of which are near the surface.

If we mistake not, Mr. Saunders, of the Agricultural Department Garden at Washington, inculcates similar views, in recommending the cutting away of the old part, or top roots of the vine, from year to year, and thus causing it to make new surface roots. Similar are the deductions from the old English practice of a mass of stones, &c., underneath all the border wherever the grape is to be grown.

In this matter of depending upon the surface roots, there is undoubtedly much that is correct; but, at the same time, we must not discard the main roots. The one extreme, heretofore practiced by German vignerons, of cutting away all surface roots, and depending only on the lower and deep roots, it is patent, has shown error; and we judge the other extreme of only looking to the surface roots would exhibit equal error. There is a mean to be taken to ensure success.

Grafting Grapes.—The practice of engrafting old standing vines with new sorts, by sawing off the crown just at the surface of the ground, then splitting it and uniting the graft, and afterwards earthing up all around it, is pretty well and generally understood. We have, however, found that splice or whip grafting on to a cane of last year, and then layering the cane, leaving only the last bud of the graft visible above the ground, to be among the good ways of obtaining new sorts, or changing varieties. Grafting cuttings of two buds on pieces of roots, and planting them out early, in the open border, leaving only the open bud level with the ground, and then mulching with some light material, as sawdust, &c., is also a successful way of growing many sorts that do not readily strike from cuttings in the open ground.

Several Varieties of Shrubs in One.—Amateurs of flowers are frequently desirous of having all the varieties of lilacs, upright honeysuckles, wiegelias, &c., but have not room to plant them. As a remedy, we tell them that an amateur friend of ours takes, for instance, a bush of the

old-fashioned lilac, and engrafts on its various limbs one or more grafts of the Persian, Josikean, Charles X., &c.; and on one bush of wiegelia rosea he has amabilis, middendafiana, &c., thus giving many varieties and occupying but a small space of ground.

Would not plants so grown by nurserymen meet ready sale? We think so.—What nurseryman will step out of the beaten track, and try the putting of several varieties of allied shrubs on one bush as an item of business.

Peonias.—All herbaceous peonias that have been growing in the same place three or more years should be separated and re planted. Early in spring is the best time. Tree peonias may also be grafted on roots of the herbaceous sorts, and grown successfully.

The use of about four bushels of salt, with one bushel of plaster (gypsum), per acre, and sown early in spring, is found profitable as a manure to dwarf pear plantations; and on grass grounds its evidence of value is so great, that whoever applies it once will hardly fail of doing so in succeeding years.

Best Time to Separate Layers from the Vines.—A correspondent writes that a "large portion of his layers of grape vines made the past season, and left on the vine, have already been destroyed by the surface freezing and thawing, thus breaking off the roots, which afterwards are rotted by too much wet."

Layers, unquestionably, should be cut off from the parent plant, taken up, and heeled in, in some dry and sheltered position in the Fall. This, we believe, is the common practice of those who grow layers of grape vines for sale. A little practice of one of our friends during the past year leads to a question as to when is the best time to separate the layer. His experiment was in cutting free the layer in July, or after it had thrown out roots two inches long; and his statement is, that such layers in the Fall had nearly double the amount of roots of those left to grow connected with the parent vine. We suggest to practitioners the making trial of cutting away layers from the parent vine this coming season, at different times—say July, August, and September—and oblige by sending us account thereof.

A grape amateur at the West—viz., Wm. Muir, Esq., of Fox-Creek P. O., St. Louis County, Mo.,—writes us that he has now one hundred and three varieties of grapes growing, the most of which, if not all, will be in fruiting the coming season. He also, with Mr. Hussman, of Hermann, writes us that Rogers' No. 1 promises of great value in Missouri. This is what we should expect, as their length of season and great heat must cause it to ripen perfectly, which, as a rule, it fails to do in its native locality.

Creditable.—"The Meramec Horticultural Society," of Missouri, have issued a circular to all fruit-growers of the West and South, in reference to the holding of the next meeting of the American Pomological Society in St. Louis next Fall. They call for action of all fruit men, and for co-operation of all railroad men, city authorities, &c., &c., in presenting not only a show of fruits to eastern men, but a free show of the State, by passing members of the convention over it, that they may see and understand the adaptation of Missouri to the uses of an enlightened people, to its advantages as a fruit region, and its value as a country promising abundant remuneration to the prosecutor of any business. We shall look for a good time when the meeting convenes.

Ashes for Poultry.—When feeding our hens the past winter, we have practiced mixing a small handful of wood ashes with the meal, and found an apparent benefit to the fowls. We also give in the meal, twice a week, about one tea-spoonful of Cayenne pepper. Our stock numbers thirty birds.

Golden Royal Apple.—This variety is among apples what the Seckel is among pears—a fruit of surpassing excellence in quality; but it is only medium in size, and not particularly showy for market sales.

Every grower of the apple should possess one tree of it for his own use.

Planting Peas.—In planting peas this spring, our friends should remember that experiments have proven that the pea will vegetate at even one foot deep, but that a mean depth of four to six inches is best—say one furrow depth of plowing, or a spade depth of that implement is used in preparing the ground. If planted too shallow, say two inches, the vines soon dry up; and if too deep, they are liable to mildew sooner than when a medium depth is had.

Rockwork.—One of our correspondents writes, that for several years, in the practice of landscape gardening, he has been in the habit of using our common wild brakes or ferns in constructing simple but effective pieces of rockwork, at little cost. Where a northern exposure is had, or on a bank adjacent to water, even if a south exposure, their growth and beauty is retained as perfect as in their native wood locations.

Dielytra Spectabilis Alba.—A specimen of this new variety of our well-known hardy herbaceous plant, is now in bloom in our green-house. The flower is in all respects like the pink variety, except in color, which at first is a pure white, afterwards changing to blush. The foliage is of a light green, even from the first commencement of growth. It forces well, and is a desirable acquisition, both for the garden and in-door culture.

How to Raise Early Cucumbers.—1. A good method to produce early cucumbers is the following:—Make a trench at the warmest place of the garden; into this put old manure—about three inches—and on this good earth—three inches—on this plant the seeds, and cover them with sawdust—two to three inches. Cucumbers thus treated are said to come earlier, to endure rain, drouth, and even a little frost, far better than those treated another way.—Against severe night-frosts they should be protected by boards.

2. Take middle-sized flower-pots; fill them two-thirds with good soil; put the seeds on this, and cover with sawdust; sprinkle with warm water, and put the pots near the stove. On the appearance of the plants, place the pots near the window.—Care should be taken to harden the plants before transplanting them into the garden, by admitting air to them both day and night.

3. Take egg shells (the hole to be on the upper end three-fourths of an inch), fill them with good soil, and therein plant the seeds. Plants thus raised, kept either in the house or hot-bed, are easily transplanted.

How to Raise Many Cucumbers.—1. Never take fresh seed of last season, but always take seeds two to four years old.—Who can not get old seed, should have his fresh seeds dried near a warm stove during several weeks. Some gardeners, in order to obtain this end, carry their seed in their pockets. Old cucumber seed will bear earlier and more fruit. Fresh seed will make weak plants, and is longer in germinating.

2. Pinch off the end of the main shoot. This will strengthen the growth of the vine, the laterals will come out sooner, and you will get more fruit before frost sets in again.

How to get Fine Flavored Cucumbers.—1. Get your seed from a reliable seedsman.

2. Soak your seed in milk for about twenty-four hours before sowing.

Agellulus.

Several valuable articles, Table matter, book and catalogue notices, &c., in type, will appear in next number.